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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,701	11/18/2005	Francois Malaubier	VA30429	3769

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EXAMINER
RINEHART, KENNETH

ART UNIT	PAPER NUMBER
3743	

NOTIFICATION DATE	DELIVERY MODE
03/11/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USIPLAW@power.alstom.com

Office Action Summary	Application No.	Applicant(s)	
	10/538,701	MALAUBIER ET AL.	
	Examiner	Art Unit	
	KENNETH B. RINEHART	3743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 October 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9 and 12-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *23* is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 3/26/09 have been fully considered but they are moot in view of new grounds of rejection. Regarding applicant's arguments that the references do not show a dedicated pipe that provides ultrafine particles intercepted by a dust extractor to a dedicated injector, the ultrafine particles are clearly discussed in the prior art. One of ordinary skill would understand per the teaching references that such a segregrated flow could be sent to a dedicated burner. The applicant is merely taking a finer grade of particles and supplying them to a dedicated burner which is clearly taught by the references and predictable.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 3, 6, 7, 12, 14, 18, 19, 20, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of DE3841874. Prior art discloses An indirect heating system in which a solid fuel circulates in the form of particles, comprising: a grinding station (3) that grinds the solid fuel into coarse, fine and ultrafine_particles and releases them as a stream of flowing particles (3); a separator (4) receives the stream from the grinding station and_intercepts the coarser particles from the_stream; at least one cyclone (5) that receives the stream from the separator, and_intercepts the fine particles from the .stream :and a dust extractor (10) receives the stream after the cyclone and_intercepts the ultrafine particles from the stream which are then …

DE3841874 teaches which are then provided by a dedicated pipe to a dedicated burner for burning in the combustion chamber, the dedicated burner is near a main burner, the intercepted coarse particles have a diameter less than 75 microns, the solid fuel is non-bituminous coal (col. 3, lines 36-51, col. 6, lines 66-col. 7, line 6, col. 7, line 38-58, figs. 1, 4), some of the … particles are provided by a second dedicated pipe to a dedicated injector that introduces the … particles into the combustion chamber, the … particles provided to the dedicated injector to introduce the … particles into the combustion chamber near the main burners (63), The … particles have a higher content of combustible material than the fine particles (This content is inherent.), the fine particles are provided to a main burner for burning in the combustion chamber (70), an intermediate silo coupled to at least one cyclone adapted to receive and store the fine particles from the cyclone (6) for the purpose improving the firing process. It would have been obvious to one of ordinary skill in the art to modify Prior art by including which are then provided by a dedicated pipe to a dedicated burner for burning in the combustion chamber, the dedicated burner is near a main burner, the intercepted coarse particles have a diameter less than 75 microns, the solid fuel is non-bituminous coal, some of the … particles are provided by a second dedicated pipe to a dedicated injector that introduces the … particles into the combustion chamber, the … particles provided to the dedicated injector to introduce the … particles into the combustion chamber near the main burners, The … particles have a higher content of combustible material than the fine particles, the fine particles are provided to a main burner for burning in the combustion chamber as taught by DE3841874 for the purpose of improving the firing process. The applicant is merely combining prior art elements according to known methods to yield predictable results. Prior art in view of DE3841874 discloses

applicant's invention substantially as claimed with the exception of the ultrafine particles have a true mass per unit volume from 0.1 kg/dm3 to 0.4 kg/dm3 lower than that of the fine particles intercepted by the cyclone. At the time the invention was made it would have been an obvious matter of design choice to a person of ordinary skill in ht art to have the ultrafine particles have a true mass per unit volume from 0.1 kg/dm3 to 0.4 kg/dm3 lower than that of the fine particles intercepted by the cyclone because applicant has not disclosed that mass per unit volume provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the mass per unit volume of Prior art or the claimed mass per unit volume because both perform the same function equally well. Prior art in view of DE3841874 discloses applicant's invention substantially as claimed with the exception of the finest particles are provided by a plurality of dedicated pipes to respective dedicated burners, each of the dedicated burners being near a respective main burner. It would have been an obvious matter of design choice to modify Prior art in view of DE3841874 to provide a plurality of pipes, since to provide for a multiplied effect involves only routine skill in the art.

Claims 4, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of EP0747629. Prior art discloses An indirect heating system in which a solid fuel circulates in the form of particles, comprising: a grinding station (3) that grinds the solid fuel into coarse, fine and ultrafine_particles and releases them as a stream of flowing particles (3); a separator (4) receives the stream from the grinding station and_intercepts the coarser particles from the_stream; at least one cyclone (5) that receives the stream from the separator, and intercepts the fine particles from the .stream :and a dust extractor (10) receives the stream after

the cyclone and intercepts the ultrafine particles from the stream which are then …. EP0747629 teaches provided by a dedicated pipe to a dedicated injector to introduce the finest particles into the combustion chamber (col. 4, lines 41-55, col. 5, lines 50-58, col. 6, lines 56-col. 7, line 37), wherein the dedicated injector is disposed near a main burner, the dedicated injector introduces the … particles downstream of a main burner (Combustion chamber 1 is main burner, fig. 1.) for the purpose of burning powdered fuel to reduce NOX. It would have been obvious to one of ordinary skill in the art to modify Prior art by including provided by a dedicated pipe to a dedicated injector to introduce the finest particles into the combustion chamber, wherein the dedicated injector is disposed near a main burner, the dedicated injector introduces the … particles downstream of a main burner as taught by EP0747629 for the purpose of burning powdered fuel to reduce NOX. The applicant is merely combining prior art elements according to known methods to yield predictable results.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of EP0747629 as applied to claim 4 above, and further in view of Vatsky (4,270,895). Vatsky teaches … particles are injected under substoichiometric conditions (col. 7, lines 55-60) for the purpose of reducing NOX. It would have been obvious to one of ordinary skill in the art to modify Prior art by including … particles are injected under substoichiometric conditions as taught by Vatsky for the purpose of reducing NOX to meet environmental regulations. The applicant is merely combining prior art according to known methods to yield predictable results. as to burn fuel under substoichiometric conditions is a well known means to reduce pollutants.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of DE3841874 as applied to claim 1 above, and further in view of FR 2,534,359. FR 2,534,359

teaches the combustion chamber is a double vault combustion chamber (page 1, lines 24-30) for the purpose of containing the combustion reaction. It would have been obvious to one of ordinary skill in the art to modify Prior art by including the combustion chamber is a double vault combustion chamber as taught by FR 2,534,359 for the purpose of containing the combustion reaction. The applicant is merely substituting one known element for another to obtain predictable results.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of DE3841874 as applied to claim 1 above, and further in view of Vatsky (4,253,403). Vatsky teaches the … particles are mixed with a hot gas (col. 3, lines 60-68) for the purpose of improving thermal efficiency. It would have been obvious to one of ordinary skill in the art to modify Prior art by including the finest particles is mixed with a hot gas as taught by Vatsky for the purpose of improving thermal efficiency. The applicant is merely combining prior art according to known methods to yield predictable results.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of DE3841874 as applied to claim 1 above, and further in view of Shuman (2083126). Shuman teaches a feeder that meters the quantity of the … particles provided to the dedicated burner (15) for the purpose of controlling the flow of fuel. It would have been obvious to one of ordinary skill in the art to modify Prior Art by including a feeder that meters the quantity of the … particles to the dedicated burner as taught by Shuman for the purpose of controlling the flow of fuel. The applicant is merely combining prior art according to known methods to yield predictable results.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of DE3841874 as applied to claim 1 above, and further in view of Tobias (6369680). Tobias teaches the combustion chamber is a front heating combustion chamber (col. 5, lines 46-col. 6, line 7) for the purpose of containing the combustion reaction. It would have been obvious to one of ordinary skill in the art to modify Prior art by including front heating combustion chamber as taught by Tobias for the purpose of containing the combustion reaction. The applicant is merely substituting one known element for another to obtain predictable results.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of DE3841874 as applied to claim 1 above, and further in view of EP 976977. EP976977 teaches a tangential heating combustion chamber (ABSTRACT) for the purpose of containing the combustion reaction. It would have been obvious to one of ordinary skill in the art to modify Prior art by including a tangential heating combustion chamber as taught by EP 976977 for the purpose of containing the combustion reaction. The applicant is merely substituting one known element for another to obtain predictable results.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of DE3841874 as applied to claim 1 above, and further in view of Malaubier et al (6415743). Malaubier teaches the dust extractor includes a bag filter or an electrostatic dust extractor (col. 3, line 11) for the purpose of removing dust. It would have been obvious to one of ordinary skill in the art to modify Prior art by including the dust extractor includes a bag filter or an electrostatic dust extractor as taught by Malaubier et al for the purpose of removing dust. The applicant is merely substituting one known element for another to obtain predictable results.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art in view of DE3841874 as applied to claim 1 above, and further in view of Lingl(4092094). Lingl teaches a dedicated intermediate silo (42, col. 6, lines 7-14) for the purpose of maintaining an air lock to prevent backward flow. It would have been obvious to one of ordinary skill in the art to modify Prior art by including a dedicated intermediate silo for the purpose of maintaining an air lock to prevent backward flow. The applicant is merely combining prior art according to known methods to yield predictable results.

Allowable Subject Matter

Claim 24 is allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

/Kenneth B Rinehart/

Supervisory Patent Examiner, Art Unit 3743